WHAT IS CLAIMED IS:

1. An optical deflector comprising:

a mirror structure having a first surface and a second surface which are in a front/back relation, the mirror structure comprising a pair of supports, a movable plate which is moved with respect to the supports, and a pair of elastic members for connecting the movable plate and the supports, such that the movable plate is able to rock with respect to the supports about the pair of elastic members as a rocking axis, the movable plate having a mirror surface on the second surface;

a single plate base for holding the mirror structure, the base having an opening for exposing the mirror surface, the supports of the mirror structure are fixed to the base with the second surfaces of the supports in contact therewith; and

driving means for driving the mirror structure, the driving means including a conductive element formed on the first surface of the movable plate, and magnetic field generating elements fixed on the base.

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2. The optical deflector according to claim 1, wherein the supports include electrode pads electrically connected to the conductive element, the base includes wiring materials for electric connection to the outside, the wiring materials have connection portions electrically connected to the electrode pads,

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and the electrode pads are electrically connected to the connection portions by wire bonding.

3. The optical deflector according to claim 2, wherein the base comprises a main substrate having the opening, and a rigid substrate fixed to the main substrate, and the wiring materials are formed on the rigid substrate.

4. The optical deflector according to claim 3, wherein the rigid substrate is within the main substrate.

5. The optical deflector according to claim 3, wherein the main substrate has conductivity, the wiring materials include a ground wiring for grounding, and the ground wiring is electrically connected to the main substrate.

6. The optical deflector according to claim 3, wherein the base further comprises a flexible substrate formed integrally with the rigid substrate.

7. The optical deflector according to claim 3, wherein the base further comprises a flexible lead wire connected to the wiring materials of the rigid substrate.

8. The optical deflector according to claim 1, wherein the conductive element comprises a coil disposed along a peripheral edge of the movable plate.

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9. The optical deflector according to claim 8, wherein the magnetic field generating elements are

disposed on the same side of the base as a side on which the mirror structure is mounted.

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10. The optical deflector according to claim 9, wherein the driving means further comprises a yoke of magnetic material, which cooperates with the magnetic field generating elements to constitute a magnetic circuit, and at least a part of the yoke is disposed in the vicinity of the first surface of the movable plate.

11. The optical deflector according to claim 1, wherein the conductive element is positioned so as to overlap the magnetic field generating elements as viewed from a direction parallel to the first and second surface of the mirror structure.

12. The optical deflector according to claim 11, wherein the base further comprises bonding portions projecting from the main substrate, and the mirror structure is fixed to the bonding portions by adhesion, so that the mirror structure is positioned remote from the main substrate.

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13. The optical deflector according to claim 1, wherein the opening of the base has a size that does not intercept the light beam incident upon the mirror surface of a neutral time at an incidence angle of 45° over a full effective width of the mirror surface, and the magnetic field generating elements are located not to intercept the light beam incident upon the mirror surface of the neutral time at the incidence angle of

45° over the full effective width of the mirror surface.

14. The optical deflector according to claim 13, wherein the magnetic field generating elements are located interposing the conductive element formed on the first surface of the movable plate, and a mirror surface effective width w_m, interval w_p of the magnetic field generating elements, base opening width w_b, height h_p of the magnetic field generating elements with respect to the mirror surface, and height h_b of an upper surface of the base opening with respect to the mirror surface satisfy conditions: $w_p > w_m + 2h_p$; and $w_b > w_m+2h_b$.

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15. An optical deflector comprising:

a mirror structure having a first surface and a second surface which are in a front/back relation, the mirror structure comprising a pair of supports, a movable plate which is moved with respect to the supports, and a pair of elastic members for connecting the movable plate and the supports, such that the movable plate is able to rock with respect to the supports about the pair of elastic members as a rocking axis, the movable plate having a mirror surface on the second surface;

a single plate base for holding the mirror structure, the base having an opening for exposing the mirror surface, the supports of the mirror structure

are fixed to the base with the second surfaces of the supports in contact therewith; and

a driver for driving the mirror structure, the driver including a coil formed on the first surface of the movable plate, and permanent magnets fixed on the base.

16. The optical deflector according to claim 15, wherein the opening of the base has a size that does not intercept the light beam incident upon the mirror surface of a neutral time at an incidence angle of 45° over a full effective width of the mirror surface, and the permanent magnets are located not to intercept the light beam incident upon the mirror surface of the neutral time at the incidence angle of 45° over the full effective width of the mirror surface.

17. The optical deflector according to claim 16, wherein the permanent magnets are located interposing the coil formed on the first surface of the movable plate, and a mirror surface effective width w_m, permanent magnet interval w_p, base opening width w_b, height h_p of the permanent magnet with respect to the mirror surface, and height h_b of an upper surface of the base opening with respect to the mirror surface satisfy conditions: $w_p > w_m + 2h_p$; and $w_b > w_m+2h_b$.

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